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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,541	04/08/2004	Scott P. Heckel	4695-00096	4921

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EXAMINER

BENTON, JASON

ART UNIT PAPER NUMBER

3747

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No. 10/820,541	Applicant(s) HECKEL ET AL.	
	Examiner Jason Benton	Art Unit 3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35 and 36 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,9,11,12,15-22,29-31,33,34,37-39,41 and 44-46 is/are rejected.
- 7) ☒ Claim(s) 3,7,8,10,13,14,23-28,32,40,42 and 43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/29/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-6, 9, 11, 12, 15-17, 19-22, 29-31, 37, 38, 41, and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over King.

The patent by King (3,761,062) shows an internal combustion engine electrostatic crankcase ventilation system, an EDC, electrostatic droplet collector (45), assembly having an inlet (12) receiving gas from the engine and an outlet (26) discharging cleaned gas.

A canister (32) is mounted to a mounting head (28) in said system, a corona discharge electrode assembly in said canister and spaced from said canister by a gap providing a corona discharge zone (Col. 4, lines 5-17), the canister providing a collector electrode and being removably mounted to said mounting head to permit removal and replacement of said collector electrode.

The corona discharge electrode assembly is mounted to the canister and is removable therewith from the mounting head.

With regards to claim 4, it is the view of the examiner that the method of fastening, be it twisted on, bolted on, or clamped on, is an obvious choice of design because no new or unexpected results are achieved by the twisting on.

Art Unit: 3747

The canister extends axially along an axis between first and second axial ends. The first end is closed and has an inlet, the second end is open and faces the mounting head.

The corona discharge electrode assembly comprises an electrical conductor attached to an electrical insulator having one or more apertures passing the gas axially therethrough from the canister to said mounting head.

The gas flows through the one or more apertures into a plenum in the mounting head, the plenum is radially inward of said threads.

The inlet is in the canister, the outlet is in the mounting head and the gas goes from the canister into a plenum in the mounting head then to the outlet, the mounting head having a wall defining the plenum on one side thereof and defining a space on the other side thereof having a high voltage electrode.

The mounting head has a passage therein extending through the space on the other side of the wall and passing gas therethrough from the plenum to the outlet.

The corona discharge electrode assembly comprises an electrical insulator having one or more apertures therethrough passing gas from the canister into the plenum.

Allowable Subject Matter

Claims 3, 7, 8, 10, 13, 14, 18, 23-28, 32-34, 40, 42, and 43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 3747


Claims 35 and 36 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Benton whose telephone number is (571) 272-4838. The examiner can normally be reached on flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Yuen can be reached on (571) 272-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JB


Noah P. Kamen
Primary Examiner